

It is respectfully requested that the amendment be entered before calculation of the filing fee and before examination by the Examiner.

Respectfully submitted,



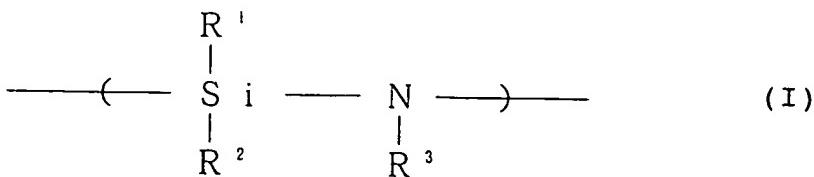
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U.S. PATENT AND TRADEMARK OFFICE

IN THE CLAIMS

2. (Amended: The photosensitive polysilazane composition according to claim 1 wherein said polysilazane is mainly a polysilazane, or [its] a modification product [having a number] thereof with said polysilazane having an average molecular weight of between about 100 to 50,000, [that contains the] and a skeleton represented with the following general formula (I):



[wherein, R¹, R² and R³ respectively and independently represent a hydrogen atom, an alkyl group, an alkenyl group, a cycloalkyl group, an aryl group, a group other than these groups in which the portion bonded directly to silicon or nitrogen is carbon, an alkylsilyl group, an alkylamino group or an alkoxy group()].

3.(Amended) The photosensitive polysilazane composition according to claim 1 wherein said polysilazane [is mainly a polysilazane having a number] has an average molecular weight of between about 100 to 100,000 [that contains the] and a skeleton represented with the following general formula (II):



[wherein, R⁴ and R⁵ respectively and independently represent a hydrogen atom, an alkyl group, an alkenyl group, a cycloalkyl group, an aryl group, a group other than these groups in which the portion bonded directly to silicon or nitrogen is carbon, an alkylsilyl group, an alkylamino group or an alkoxy group, and n is an arbitrary integer()].

5. (Amended) The photosensitive polysilazane composition according to claim 2 wherein said polysilazane modification product is a polyorganosiloxazane having an [a number] average molecular weight of between about 300 to 100,000 that contains, as its main repeating unit, -RsiN₃-, -(RsiN₂O)-, (RsiNO₂)- and -(RsiO₃)- (wherein, R is an alkyl group, an alkenyl group, a cycloalkyl group, and aryl group, an alkylamino group or an alkylsilyl group).

6. (Amended) The photosensitive polysilazane composition according to [any of claims] claim 2 [through 5] wherein said photoacid generator is a peroxide.

8. (Amended) The photosensitive polysilazane composition according to [any one of claims 1 through 7 that additionally contains] claim 1 further comprising a sensitizing dye.

10. (Amended) The photosensitive polysilazane composition according to [either of claims 8 or 9 that additionally contains] claim 8 further comprising an oxidation catalyst.

15. (New) The photosensitive polysilazane composition according to claim 3 wherein said photoacid generator is a peroxide.

16. (New) The photosensitive polysilazane composition according to claim 4 wherein said photoacid generator is a peroxide.

17. (New) The photosensitive polysilazane composition of claim 2 further comprising a sensitizing dye.

18. (New) The photosensitive polysilazane composition of claim 3 further comprising a sensitizing dye.

19.(New) The photosensitive polysilazane composition of claim 6 further comprising a sensitizing dye.

20. (New) The photosensitive polysilazane composition of claim 8 wherein said sensitizing dye is selected from coumarin, ketocoumarin and their derivatives and thiopyrylium salts.

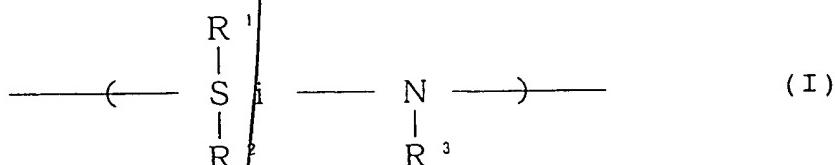
21. (New) The photosensitive polysilazane composition of claim 10 wherein said sensitizing dye is selected from coumarin, ketocoumarin and their derivatives and thiopyrylium salts.

22. (New). The photosensitive polysilazane composition according to claim 9 further comprising an oxidation catalyst.

23. (New) The photosensitive polysilazane composition according to claim 21 wherein said oxidation catalyst is palladium propionate.

What is claimed is

1. A photosensitive polysilazane composition comprising a polysilazane and a photoacid generator.
 2. The photosensitive polysilazane composition according to claim 1 wherein said polysilazane is mainly a polysilazane, or a modification product thereof with said polysilazane having an average molecular weight of between about 100 to 50,000, and a skeleton represented with the following general formula (I):



wherein, R¹, R² and R³ respectively and independently represent a hydrogen atom, an alkyl group, an alkenyl group, a cycloalkyl group, an aryl group, a group other than these groups in which the portion bonded directly to silicon or nitrogen is carbon, an alkylsilyl group, an alkylamino group or an alkoxy group.

3. The photosensitive polysilazane composition according to claim 1 wherein said polysilazane has an average molecular weight of between about 100 to 100,000 and a skeleton represented with the following general formula (II):



wherein, R⁴ and R⁵ respectively and independently represent a hydrogen atom, an alkyl group, an alkenyl group, a cycloalkyl group, an aryl group, a group other than these groups in which the portion bonded directly to silicon or nitrogen is carbon, an alkylsilyl group, an alkylamino group or an alkoxy group, and n is an arbitrary integer.

4. The photosensitive polysilazane composition according to claim 3 wherein, in the above formula (II), R⁴ is a methyl group or phenyl group, and R⁵ is a hydrogen atom.

5. The photosensitive polysilazane composition according to claim 2 wherein said polysilazane modification product is a polyorganosiloxazane having an average molecular weight of between about 300 to 100,000 that contains, as its main repeating unit, -RsiN₃)-, -(RsiN₂O)-, (RsiNO₂)- and -(RsiO₃)- (wherein, R is an alkyl group, an alkenyl group, a cycloalkyl group, and aryl group, an alkylamino group of an alkylsilyl group).

*Patent
Application
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6. The photosensitive polysilazane composition according to claim 2 wherein said photoacid generator is a peroxide.

7. The photosensitive polysilazane composition according to claim 6 wherein said peroxide is t-butyl peroxybenzoate, 3,3',4,4'-tetra(t-butylperoxycarbonyl) benzophenone or α, α' -bis(t-butylperoxy) diisopropylbenzene.

8. The photosensitive polysilazane composition according to claim 1 further comprising a sensitizing dye.

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9. 10. The photosensitive polysilazane composition according to claim 8 further comprising an oxidation catalyst.

10. 11. The photosensitive polysilazane composition according to claim 10 wherein said oxidation catalyst is palladium propionate.

11. 12. A method of forming a patterned polysilazane film comprising: a step in which a coated film is formed of a photosensitive polysilazane composition comprising a polysilazane and a photoacid generator, a step in which said coated film is exposed to light in a pattern, and a step in which the exposed portion of said coated film is dissolved off.

12. 13. The method according to claim 12, wherein, said dissolving off step is performed using a weakly alkaline aqueous solution.

13. 14. A method of forming a patterned insulating film containing a step in which a patterned polysilazane film formed by the method according to claim 12 is converted to a

14 15. The photosensitive polysilazane composition according to claim 3 wherein said photoacid generator is a peroxide.

15 16. The photosensitive polysilazane composition according to claim 4 wherein said photoacid generator is a peroxide.

16 17. The photosensitive polysilazane composition of claim 2 further comprising a sensitizing dye.

17 18. The photosensitive polysilazane composition of claim 3 further comprising a sensitizing dye.

18 19. The photosensitive polysilazane composition of claim 6 further comprising a sensitizing dye.

19 20. The photosensitive polysilazane composition of claim 8 wherein said sensitizing dye is selected from coumarin, ketocoumarin and their derivatives and thiopyrylium salts.

20 21. The photosensitive polysilazane composition of claim 18 wherein said sensitizing dye is selected from coumarin, ketocoumarin and their derivatives and thiopyrylium salts.

21 22. The photosensitive polysilazane composition according to claim 9 further comprising an oxidation catalyst.

22 23. The photosensitive polysilazane composition according to claim 21 wherein said oxidation catalyst is palladium propionate.